

What is claimed is:

1. A thermal dissipation and shielding system for an electronic device, comprising:

an electronic device comprising a first component which comprises a heat source, wherein the first component transmits heat to an external surface of the electronic component;

a thermal solution comprising two major surfaces, the thermal solution positioned such that one of its major surfaces is in operative contact with the first component such that it is interposed between the first component and the external surface of the electronic component to which the first component transmits heat, wherein the thermal solution comprises at least one sheet of flexible graphite.

2. The system of claim 1, wherein the electronic device further comprises a heat dissipation device positioned in a location not directly adjacent to the first component and further wherein one of the major surfaces of the thermal solution is in operative contact with the heat dissipation device.

3. The system of claim 2, wherein the heat dissipation device comprises a heat sink, a heat pipe, a heat plate or any combination thereof.

4. The system of claim 1, wherein the thermal solution has an in-plane thermal conductivity of at least about 140 W/m<sup>2</sup>K.
5. The system of claim 4, wherein the thermal solution has a through-plane thermal conductivity of no greater than about 12 W/m<sup>2</sup>K.
6. The system of claim 1, wherein the thermal solution further comprises a protective coating thereon.
7. The system of claim 6, wherein the protective coating has a thermal conductivity less than the through-plane thermal conductivity of the at least one sheet of flexible graphite.
8. The system of claim 1, wherein a thermal transfer material is positioned between the thermal solution and the first component.
9. The system of claim 8, wherein the thermal transfer material comprises a metal or a thermal interface.
10. The system of claim 1, wherein the electronic device is a laptop computer and the external surface comprises a portion of the laptop computer case.

11. A thermal dissipation and shielding system for an electronic device, comprising:

an electronic device comprising a first component which comprises a heat source and a second component to which the first component transmits heat;

a thermal solution comprising two major surfaces, the thermal solution positioned such that one of its major surfaces is in operative contact with the first component such that it is interposed between the first component and the second component, wherein the thermal solution comprises at least one sheet of flexible graphite.

12. The system of claim 11, wherein the electronic device further comprises a heat dissipation device positioned in a location not directly adjacent to the first component and further wherein one of the major surfaces of the thermal solution is in operative contact with the heat dissipation device.

13. The system of claim 12, wherein the heat dissipation device comprises a heat sink, a heat pipe, a heat plate or any combination thereof.

14. The system of claim 11, wherein the thermal solution has an in-plane thermal conductivity of at least about 140 W/m<sup>2</sup>K.
15. The system of claim 14, wherein the thermal solution has a through-plane thermal conductivity of no greater than about 12 W/m<sup>2</sup>K.
16. The system of claim 11, wherein the thermal solution further comprises a protective coating thereon.
17. The system of claim 16, wherein the protective coating has a thermal conductivity less than the through-plane thermal conductivity of the at least one sheet of flexible graphite.
18. The system of claim 11, wherein a thermal transfer material is positioned between the thermal solution and the first component.
19. The system of claim 18, wherein the thermal transfer material comprises a metal or a thermal interface.
20. The system of claim 11, wherein the electronic device is a laptop computer, the first component comprises the hard drive of the laptop computer and the second component comprises the chipset of the laptop computer.